=> d his

```
(FILE 'REGISTRY' ENTERED AT 09:49:00 ON 03 MAR 2004)
                DEL HIS Y
                ACT TRAVISS2/A
                STR
L1
          47712) SEA FILE=REGISTRY SSS FUL L1
L2 (
L3
                STR
          15554 SEA FILE=REGISTRY SUB=L2 SSS FUL L3
L4
               ACT TRAVISS3/A
                STR
L5
                STR
L6
          47712) SEA FILE=REGISTRY SSS FUL L6
L7 (
                STR
\Gamma8
          15554) SEA FILE=REGISTRY SUB=L7 SSS FUL L8
L9 (
L10
                STR
            14 SEA FILE=REGISTRY SUB=L9 SSS FUL L10 OR L5
L11
            315 S L4 AND 4432.3/RID
L12
                E SPHINGOSINE/CN
              1 S E3
L13
                E CHOLESTEROL/CN
              1 S E3
L14
                E NITRIC OXIDE/CN
              1 S E3
L15
     FILE 'CAPLUS' ENTERED AT 10:18:25 ON 03 MAR 2004
         39432 S L4
L16
         91604 S L15 OR NITRIC OXIDE
L17
         345446 S PHOSPHOGLYCER? OR GLYCEROL? OR GLYCERID? OR DIACYLGLYCER? OR
L18
            136 S L16 AND L17 AND L18
L19
L20
            198 S L11 OR L12
            12 S L20 AND L17
L21
        100538 S DRUG DELIVER?
L22
         53277 S MEDICAL OR BANDAGE? OR PATCH?
L23
             14 S L19 AND (L22 OR L23)
L24
L25
             15 S L19 AND 63/SX,SC
L26
             18 S L24 OR L25
L27
             17 S L26 NOT L21
```

McIntosh 09/745,226 => fil req FILE 'REGISTRY' ENTERED AT 10:28:47 ON 03 MAR 2004 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2004 American Chemical Society (ACS) Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem. 2 MAR 2004 HIGHEST RN 657348-90-8 STRUCTURE FILE UPDATES: DICTIONARY FILE UPDATES: 2 MAR 2004 HIGHEST RN 657348-90-8 TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003 Please note that search-term pricing does apply when conducting SmartSELECT searches. Crossover limits have been increased. See HELP CROSSOVER for details. Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html => d que stat 14 Ll STR G1 4 o-n=0N---N=-0s-n=01 @2 3 5 @6 7 8 @9 10 VAR G1=2/6/9NODE ATTRIBUTES: CONNECT IS E2 RC AT 1 CONNECT IS E2 RC AT 5 CONNECT IS E3 RC AT DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 10 STEREO ATTRIBUTES: NONE L2 (47712) SEA FILE=REGISTRY SSS FUL L1 L3 STR G1 4 0 - N = 0N--N=0s-n=01 @2 3 5 @6 7 8 @9 10

VAR G1=2/6/9 NODE ATTRIBUTES:

CONNECT IS E2 RC AT 1
CONNECT IS E2 RC AT 2
CONNECT IS E2 RC AT 5
CONNECT IS E2 RC AT 6
CONNECT IS E3 RC AT 8
CONNECT IS E2 RC AT 9
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

Page 2 searched by Alex Waclawiw

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

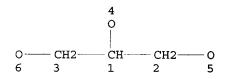
L4 15554 SEA FILE=REGISTRY SUB=L2 SSS FUL L3

100.0% PROCESSED 47712 ITERATIONS

15554 ANSWERS

SEARCH TIME: 00.00.01

=> d que stat l11 L5 ST



-> glycerols

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE

L6

518

S-N-O 1 @2 3 G1 4 O—N=O

5 @6 7

N-N=0 8 @9 10

VAR G1=2/6/9

NODE ATTRIBUTES:

CONNECT IS E2 RC AT

CONNECT IS E2 RC AT 5

CONNECT IS E3 RC AT

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

G1 4

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L7 (47712) SEA FILE=REGISTRY SSS FUL L6

L8 STR

511

S-N=O 1 @2 3 O-N=O 5 @6 7 N-N=0 8 @9 10

VAR G1=2/6/9

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 1

CONNECT IS E2 RC AT

CONNECT IS E2 RC AT

Page 3 searched by Alex Waclawiw

CONNECT IS E2 RC AT CONNECT IS E3 RC AT CONNECT IS E2 RC AT DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

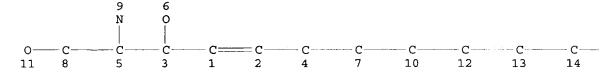
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

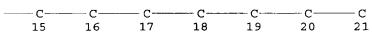
STEREO ATTRIBUTES: NONE

L9 (15554) SEA FILE=REGISTRY SUB=L7 SSS FUL L8 L10STR



-> sphingosines

Page 1-A



Page 1-B

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

14 SEA FILE=REGISTRY SUB=L9 SSS FUL L10 OR L5

100.0% PROCESSED 170 ITERATIONS

14 ANSWERS

SEARCH TIME: 00.00.01

=> d que stat 112

STR

G1 4 N-N=0 8 @9 10 s-N=00 - N = 05 @6 7 1 @2 3

VAR G1=2/6/9

NODE ATTRIBUTES:

CONNECT IS E2 RC AT

CONNECT IS E2 RC AT

CONNECT IS E3 RC AT

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

Page 4 searched by Alex Waclawiw

```
L2 ( 47712) SEA FILE=REGISTRY SSS FUL L1
1.3
                STR
                G1 4
0 - N = 0
                                        N-N=0
1 @2 3
                        5 @6 7
                                         8 @9 10
VAR G1=2/6/9
NODE ATTRIBUTES:
CONNECT IS E2 RC AT
                       6
CONNECT IS E3 RC AT
CONNECT IS E2 RC AT
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10
                                                                    Asterols
Structure
ringspoten
STEREO ATTRIBUTES: NONE
         15554 SEA FILE=REGISTRY SUB=L2 SSS FUL L3
L12
            315 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND 4432.3/RID
=> d que 113; d 113
              1 SEA FILE=REGISTRY ABB=ON PLU=ON SPHINGOSINE/CN
L13 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN
   123-78-4 REGISTRY
     4-Octadecene-1,3-diol, 2-amino-, (2S,3R,4E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
    4-Octadecene-1,3-diol, 2-amino-, (E)-D-erythro- (8CI)
     4-Octadecene-1,3-diol, 2-amino-, [R-[R*,S*-(E)]]-
OTHER NAMES:
     (-)-D-erythro-Sphingosine
     (2S, 3R) - Sphingosine
CN
     (2S, 3R, 4E) -2-Amino-4-octadecene-1, 3-diol
CN
     (4E)-Sphingenine
CN
    4-Sphingenine
CN
     4-trans-Sphingenine
CN
    C18-Sphingosine
CN
    D-(+)-erytho-4-trans-Sphingenine
CN
    D-erythro-C18-Sphingosine
CN
    D-erythro-Sphingosine
CN
    D-Sphingosine
CN
    erythro-4-Sphingenine
CN
    erythro-C18-Sphingosine
CN
    Erythrosphingosine
CN
    Sphingenine
CN
    Sphingosine
CN
    trans-4-Sphingenine
FS
    STEREOSEARCH
DR
     45261-75-4
MF
    C18 H37 N O2
```

Page 5 searched by Alex Waclawiw

STEREO ATTRIBUTES: NONE

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, PROMT, TOXCENTER, USPAT2, USPATFULL (*File contains numerically searchable property data)

Other Sources: EINECS**

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (-). Double bond geometry as shown.

Me
$$(CH_2)_{12}$$
 E R S OH

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1061 REFERENCES IN FILE CA (1907 TO DATE)
60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1061 REFERENCES IN FILE CAPLUS (1907 TO DATE)
19 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d que l14;d l14 L14 1 SEA FILE=REGISTRY ABB=ON PLU=ON CHOLESTEROL/CN

L14 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN 57-88-5 REGISTRY Cholest-5-en-3-ol (3β) - (9CI) (CA INDEX NAME) OTHER CA INDEX NAMES: Cholesterol (8CI) OTHER NAMES: (-)-Cholesterol $\Delta 5$ -Cholesten-3 β -ol CN 3β-Hydroxycholest-5-ene CN $5:6-Cholesten-3\beta-ol$ CN CN Cholest-5-en-3B-ol Cholesterin CNCN Cholesteryl alcohol CN Dythol CNLidinit CNLidinite CN NSC 8798 CN Provitamin D FS DR 80356-33-8, 209124-38-9, 218965-24-3, 262418-13-3, 378185-03-6 C27 H46 O MF CI COM LCSTN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*,

DIOGENES, DIPPR*, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB

(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

Me
$$(CH_2)_3$$
 $CHMe_2$

Me R H

S H S H

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

101396 REFERENCES IN FILE CA (1907 TO DATE)
8746 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
101528 REFERENCES IN FILE CAPLUS (1907 TO DATE)
15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT,

=> d que l15; d l15 L15 1 SEA FILE=REGISTRY ABB=ON PLU=ON "NITRIC OXIDE"/CN

L15 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN 10102-43-9 REGISTRY RNCNNitrogen oxide (NO) (8CI, 9CI) (CA INDEX NAME) OTHER NAMES: Amidogen, oxo-CN CNINOmax CNNitric oxide CNNitric oxide (NO) CN Nitric oxide trimer CN Nitrogen monooxide CN Nitrogen monoxide CN Nitrogen oxide (N404) CN Nitrogen(II) oxide CN Nitrosyl radical CN OHM 11771 DR 53851-19-7, 51005-20-0, 51005-21-1, 90452-29-2 MF и о CI COM STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,

Page 7 searched by Alex Waclawiw

ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VETU, VTB

(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

N=== 0

78192 REFERENCES IN FILE CA (1907 TO DATE)
458 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
78381 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> fil caplus
FILE 'CAPLUS' ENTERED AT 10:30:00 ON 03 MAR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 3 Mar 2004 VOL 140 ISS 10 FILE LAST UPDATED: 2 Mar 2004 (20040302/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

```
=> d que nos 121
 L1
                 STR
L2 (
          47712) SEA FILE=REGISTRY SSS FUL L1
 L3
                 STR
 L4
          15554 SEA FILE=REGISTRY SUB=L2 SSS FUL L3
 L5
                 STR
 L6
                 STR
 T.7
          47712) SEA FILE=REGISTRY SSS FUL L6
 1.8
                 STR
          15554) SEA FILE=REGISTRY SUB=L7 SSS FUL L8
 L9
 L10
                 STR
L11
             14 SEA FILE=REGISTRY SUB=L9 SSS FUL L10 OR L5
L12
        315 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND 4432.3/RID
L15
              1 SEA FILE=REGISTRY ABB=ON PLU=ON "NITRIC OXIDE"/CN
L17
          91604 SEA FILE=CAPLUS ABB=ON PLU=ON L15 OR NITRIC OXIDE/OBI
L20
            198 SEA FILE=CAPLUS ABB=ON PLU=ON L11 OR L12
 L_{2}1
             12 SEA FILE=CAPLUS ABB=ON PLU=ON L20 AND L17
```